

Common Terms in Motion:

Inertia: reluctance of a body to change what it is doing (either rest or motion)
ie. a barbell lying on the floor or a baseball flying through the air (stick your hand out to catch it!!!!)

Inertia is directly related to the mass of the object against gravity

Force: is the action which causes change to a body. A body at rest can be made to move when another force is applied to it. (ie. pushing or pulling)

Speed: is a relationship between distance and the time it takes to cover it
distance/time

Velocity: is the vector quality of speed (displacement/time)

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Acceleration: is the relationship between the change in velocity in a period of time

$$V_{\text{final}} - V_{\text{initial}} / \text{time}$$

Positive Acceleration = speeding up

Negative acceleration = slowing down (deceleration)

Momentum: describes the relationship between mass and velocity. It is the product of these two factors which determines the object's momentum.

Friction: describes the force which opposes the motion or impending motion. Usually caused by air, water or various surfaces.

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